IN THE CLAIMS

1. (currently amended) A power supply, comprising:

an input receiving an input voltage **of a plurality of nominal input voltages**;

a selectively actuated boost converter coupled to the input and operable to selectively boost the input voltage; and

a forward converter operable to convert **dynamically** the input voltage **of the plurality of nominal input voltages** to a plurality of regulated output voltages.

2. (original) The power supply of claim 1 wherein the selectively actuated boost converter includes means for comparing the input voltage to a reference voltage and boosting the input voltage above the reference voltage when the input voltage is less than the reference voltage.

3. (original) The power supply of claim 1 wherein the plurality of output voltages are cross-regulated.

4. (original) The power supply of claim 1 wherein the power supply produces the regulated output voltages for the input voltage which has a greater than 6.5:1 input ratio.

5. (original) The power supply of claim 4 wherein the power supply produces the regulated output voltages across the input ratio with an efficiency in excess of about 75%.

6. (original) The power supply of claim 1 wherein the forward converter provides ground isolation between the input voltage and the plurality of output voltages.

7. (original) The power supply of claim 1 wherein the forward converter includes a resonant reset circuit.

8. (original) The power supply of claim 1 wherein the forward converter utilizes a coupled output inductor to produce the plurality of output voltages.

9. (original) The power supply of claim 8 wherein the coupled output inductor is a trifilar wound, interleaved transformer.

10. (original) The power supply of claim 1 wherein the forward converter utilizes an isolation transformer.

11. (original) The power supply of claim 10 wherein the isolation transformer is a trifilar wound, interleaved transformer.

12. (original) The power supply of claim 1 further including, for each of the plurality of output voltages, a low drop-out regulator for producing a corresponding regulated output voltage.

13. (original) The power supply of claim 1 further including an input protection circuit coupled to receive the input voltage and provide over-current, over-voltage and line drop out protection.

14. (currently amended) The power supply of claim 1 further including a linear regulator circuit couple**d**[[s]] to receive the input voltage and provide a start-up bias voltage.

15. (original) The power supply of claim 1 wherein the boost converter includes a circuit for disabling boost operation in response to a sleep mode control signal.

16. (original) The power supply of claim 15 further including, for each of the plurality of output voltages, a low drop-out regulator for producing a corresponding regulated output, each low drop-out regulator including a circuit for disabling the regulator in response to the sleep mode control signal.

17. (original) The power supply of claim 1 further including a supply status circuit that provides a visual indication of power supply operational status.

18. (original) The power supply of claim 17 wherein the visual indications include on, off and in sleep mode.

19. (currently amended) A power supply circuit, comprising:

a voltage booster including:

a boost circuit to boost an input voltage **of a plurality of nominal input voltages** to a boost voltage; and

a mode selector that activates the boost circuit if the input voltage **of the plurality of nominal input voltages** is less than a threshold voltage and deactivates the boost circuit if the input voltage **of the plurality of nominal input voltages** is greater than the threshold voltage; and

a multi-voltage output forward converter circuit that receives the input/boost voltage **of the plurality of nominal input voltages** and generates a plurality of DC output voltages therefrom.

20. (original) The power supply circuit according to claim 19, further including a low drop-out voltage regulator circuit for each of the plurality of DC output voltages.

21. (original) The power supply circuit according to claim 19, wherein the multi-voltage output forward converter circuit comprises: a first transformer having a primary winding and a plurality of secondary windings; a second transformer having a plurality of windings corresponding to the plurality of secondary windings, wherein the plurality of windings are coupled to the plurality of secondary windings where the plurality of DC output voltages are generated.

22. (original) The power supply circuit according to claim 21 wherein the plurality of windings on the second transformer form a coupled output inductance.

23. (original) The power supply circuit according to claim 21, wherein the multi-voltage

output forward converter circuit further comprises: a sensor to sense one of the plurality of DC output voltages; a switching circuit coupled to the primary winding of the first transformer, the switching circuit selectively actuated to draw energy through the primary winding of the first transformer in response to the sensed output voltage.

24. (original) The power supply circuit according to claim 23, wherein the switching circuit comprises: a switching device connected in series with the primary winding of the first transformer; and a pulse width modulation control circuit generating a control signal for actuating the switching device, the control signal having a variable duty cycle set responsive to the sensed output voltage.

25. (original) The power supply circuit according to claim 21 wherein the first and second transformers have a trifilar wound interleaved design.

26. (original) The power supply circuit according to claim 19 wherein the input voltage and at least one of the plurality of DC output voltages are ground isolated.

27. (original) The power supply circuit according to claim 19 wherein the forward converter circuit includes a resonant reset functionality which obviates a need for a discrete snubber circuit.

28. (original) The power supply circuit according to claim 19 wherein the plurality of DC output voltages are cross-regulated.

29. (original) The power supply circuit according to claim 19 wherein the forward converter circuit generates the plurality of DC output voltages at regulated levels across an input voltage ratio of at least 6.5:1.

30. (original) The power supply circuit according to claim 19 wherein the forward converter circuit generates the plurality of DC output voltages at regulated levels across an input

voltage ratio of at least 10:1.

31. (original) The power supply circuit according to claim 19 further including an input circuit that smoothes the input voltage.

32. (original) The power supply circuit according to claim 31, wherein the input circuit includes both inductive and capacitive elements.

33. (original) The power supply circuit according to claim 32, wherein the inductive and capacitive elements are shared elements between the input circuit to smooth the input voltage and the voltage booster to boost the input voltage to the boost voltage.

34. (original) The power supply circuit according to claim 19, wherein the boost circuit of the voltage booster comprises a switching regulator for voltage step-up operation.

35. (original) The power supply circuit according to claim 34, wherein the switching regulator is a pulse width modulated regulator.

36. (original) The power supply circuit according to claim 19, wherein the mode selector implements a bypass operation to bypass the input voltage around the boost circuit when the input voltage is greater than the threshold voltage.